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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,546	08/01/2003	Steven R. Miller	60130-1396/02MRA0126	2683

26096 7590 03/20/2006  
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BIRMINGHAM, MI 48009

EXAMINER
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GOODEN JR, BARRY J

ART UNIT	PAPER NUMBER
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3616

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/632,546

Applicant(s)

MILLER ET AL.

Examiner

Barry J. Gooden Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12/8/05 Amendment.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

This office action is in response to the amendment filed on 12/19/05. Currently claims 1-7 are amended and claims 8-15 are added.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claim 1, at page 4 of the Amendments, "laterally spaced apart air springs, with one arranged between said frame and each of said control arms" is unclear.

It appears to connote that one air spring may be attached to both control arms and thereby motivate both control arms.

Examiner suggests replacing "between said frame and each of said control arms" with -- between said frame and one of each of said control arms --.

In regards to claim 2, at page 4 of the Amendments, "said air springs arranged between said frame and said each of said upper control arms" is unclear.

Examiner suggests replacing with -- one of each of said air springs is arranged between said frame and one of each of said upper control arms--.

In regards to claim 6, at page 5 of the Amendments, "includes a valve" is unclear.

Examiner suggests replacing with -- includes at least one valve --.

In regards to claims 4 and 6, at page 5 of the Amendments, "said air springs include opposing ends that support said knuckles at second pivotal connections" is unclear.

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It appears to suggest the ends of the air springs opposing one another are supporting the knuckles at second pivotal connections, which is not the case. The ends of the air springs do not appear (see Applicant's Figure 2) to oppose each other at all and the opposing ends of an individual air spring cannot both be connected to the same pivotal location.

Examiner suggests replacing with -- said air springs support said knuckles at second pivotal connections --.

In regards to claim 7, at page 5 of the Amendments, "wherein said valve including at least one valve associated with each of said air spring s with said valves being" is unclear.

Examiner suggests replacing with -- wherein said at least one valve is associated with one of each of said air springs, and said at least one valve being --.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 4-9, and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Goncourt et al., US Patent 4,854,606, in view of Pees et al., US Patent 4,934,667.

In regards to claims 1, 2, 4-9, and 11-15, de Goncourt et al. show all of the claimed elements including a vehicle suspension system comprising:

a frame (9);

a pair of laterally spaced apart control arms (13,14) supported by the frame (9) at first pivotal locations (11,12);

a knuckle (15,16) connected to each of said control arms (13,14);

a lateral leaf spring (1) interconnected between said knuckles (15,16); and,

laterally spaced apart absorbers (27,28), with one arranged between said frame (9) and one of each of said control arms (13,14);

wherein said control arms (13,14) are upper control arms, and said absorbers (27,28) are arranged between said frame (9) and one of each of said upper control arms (See Figure 3);

wherein said absorbers (27,28) support said knuckles (15,16) at second pivotal connections (25,26);

wherein axes extend through said first (11,12) and second (25,26) pivotal connections, and said knuckles (15,16) being rotatable about said axes.

de Concourt et al. show all of the claimed elements excluding air springs and valve details.

Pees et al. teach an air spring damper (12) having an air spring (generally shown at 164), a pressurized air source (200), a controller (214) for actuating valves (210,212) wherein at least one valve (210,212) is associated with one of each of said air springs (12) and said at least one valve (210,212) being independently actuatable (Column 8, Lines 38-41) in response to commands from said controller (214).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the suspension of de Concourt et al. in view of the teachings of Pees et al. to include an air spring damper and thus an air spring instead of a traditional damper so as to provide optimized vehicle body isolation and damping of both body and wheel axle at their natural frequencies (Abstract, Pees et al.).

5. Claims 1-4, 8, 9, 10, 11, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young, US Publication 2004/0051262 A1 in view of Merkle, US Patent 4,493,481.

In regards to claims 1-4, 8, 9, 10, 11, and 15 Young discloses a vehicle suspension comprising a frame (12), a pair of laterally spaced apart upper control arms (36a and 36b) pivotally supported by the frame at first pivotal connections (118a and 118b), a knuckle (26) connected to each of the upper control arms, a lateral leaf spring (34) interconnected between the lower portions of the knuckles (32) and

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laterally spaced apart coil over damper springs (112a and 112b) arranged between the frame and the upper control arms (Figures 5-7 and 12);

wherein the upper control arms (36a and 36b) extend from said first pivotal connections (118a, 118b) to portions opposite said knuckles (26) said springs (112a, 112b) arranged between said portions and said frame (12);

wherein said springs (112a, 112b) support said knuckles (26); and,

wherein axes extend through said first (118a, 118b) and second pivotal (116a, 116b) connections, said knuckles (26) rotatable about said axes.

Young discloses all of the claimed elements as previously discussed, except the laterally spaced apart air springs.

Accordingly, Merkle teaches an air spring (Reference is made to Figure 1; Column 7, Lines 29-33).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the suspension of Young in view of the teachings of Merkle to include an air spring so as to provide a simpler construction, improved force transmission, reliable and inexpensive to manufacture spring support. (Column 2, Line 54 – Column 3, Line 10).

The examiner further notes that the recitation that the air springs “to be arranged” between one of an upper control arm and a frame member is a functional recitation and does not positively recite that the air spring is arranged between the upper control arm and the frame member.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry J. Gooden Jr. whose telephone number is (571) 272-5135. The examiner can normally be reached on Monday-Friday 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Barry J Gooden Jr.  
Examiner  
Art Unit 3616

BJG

 3/15/06

**PAUL N. DICKSON**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3600**